

REMARKS

The Examiner has indicated in the Office Action that the application contains claims drawn to a non-elected invention, and that a complete reply to the Office Action must include a cancellation of non-elected claims or other appropriate action. The non-elected claims have been cancelled, without prejudice or disclaimer, to comply with the Examiner's requirement, but Applicant reserves the right to file continuing application(s) drawn to claims 57-117.

The amendments contained herein duplicate the amendments contained in the Amendment Under 37 C.F.R. §1.116, filed in the above-captioned application on July 28, 2004, which were not entered.

Claims 47-49 and 118-120 were rejected in the Office Action under 35 U.S.C. §102(b) as being anticipated by Kajita et al., U.S. Patent No. 5,953,634. Claims 47-56 and 118-121 were rejected in the Office Action under 35 U.S.C. §103(a) as being unpatentable over Yuuki et al., U.S. Patent No. 5,776,254 in view of Kajita et al., Eguchi et al., U.S. Patent No. 5,618,761, and Moise et al., U.S. Patent No. 6,211,035. Claims 50-56 and 121 were rejected in the Office Action under 35 U.S.C. §103(a) as being unpatentable over Kajita et al., and further in view of Eguchi et al. and Moise et al.

Since the rejections of claims 47-56 and 118-121 and 50-56 and 118-120 under 35 U.S.C. §103(a) are based in part on Moise et al., U.S. Patent No. 6,211,035, an invalid reference, as was argued in the previous amendments filed on September 17, 2003, and July 28, 2004, which argument has not been responded to by the Examiner heretofore and which is again set forth below, they should be withdrawn.

Applicants respectfully note that the present application is a U.S. national stage application filed in accordance with 35 U.S.C. §371 of International Application No. PCT/JP99/04145, which has an international filing date of August 2, 1999. The international application properly claims priority to the following priority applications: Japanese Patent Application Nos. 10/219183, 10/219184 and 10/219187, each filed on August 3, 1998. In the present national stage application, in addition to the right of priority to which Applicants are entitled under 35 U.S.C. §365, the present national stage application includes a claim for priority under 35 U.S.C. §119(a) to the same Japanese priority applications. According to M.P.E.P. §1893.03(c), “[i]f the 35 U.S.C. §119(a) and 35 U.S.C. §365(b) priority claim is to an application, the priority of which was properly claimed in the international application, the claim for priority is acknowledged” Since the priority applications were properly claimed in the international application, and since verified English translations of the Japanese priority documents were enclosed with the amendment filed on September 17, 2003, it is respectfully submitted that present U.S. national stage application is entitled to an effective filing date of August 3, 1998, based on the priority date of the aforementioned international and Japanese priority applications.

It is respectfully noted that the filing date of Moise is September 9, 1999. However, Moise claims priority to Provisional Application No. 60/123,687, filed March 10, 1999, Provisional Application No. 60/114,228, filed December 30, 1998, Provisional Application No. 60/099,848, filed September 11, 1998, and Provisional Application No. 60/099,571, filed September 9, 1998. *Even assuming* that all of the claims of Moise are entitled to the filing date of the earliest filed provisional application (i.e., September 9, 1998), even the earliest effective filing date of Moise is *after* the effective filing date of the present application (i.e., August 3, 1998). Therefore, since even the

earliest effective filing date of Moise is *after* the effective filing date of the present application, it is respectfully submitted that Moise does not qualify as prior art to the present application, and, therefore, cannot be used, either alone or in combination with any other reference, to reject the claims of the present application.

Independent claims 47 and 119-121 provide that the total pressure of a vacuum chamber is kept at 1×10^{-2} Torr or lower during formation of the metal oxide dielectric film on the substrate. Kajita et al. does not disclose, teach, or suggest, such a feature. The Examiner in the Office Action indicates that Kajita et al. discloses maintaining the total pressure of the vacuum chamber less than 1×10^{-4} Pa, which is allegedly less than 1×10^{-2} Torr, and that the deposition method of forming a metal oxide layer is a thermal CVD method. However, it is respectfully submitted that the Examiner erroneously equates the process in Kajita et al. to the process claimed in independent claims 47 and 119-121. The Examiner's description of the disclosure in Kajita et al. merely indicates an ordinary preparation for the deposition (film-forming process), that is, evacuating gases from the chamber before the deposition in order to prevent contamination. Specifically, column 17, lines 40-45 of Kajita et al., merely indicates that the film-forming process is started after the interior of the reaction chamber is exhausted to a vacuum degree of 1×10^{-4} Pa. However, subsequently, Kajita et al. indicates that during the film forming process, the partial pressure of the source gas is about 0.3 Torr and the partial pressure of the O_2 gas is about 0.08 Torr, (column 17, lines 55-57), both partial pressures being in excess of 1×10^{-2} Torr, which is the upper limit for the total pressure of the vacuum chamber, as claimed in independent claims 47 and 119-121. Thus, Kajita et al. does not disclose keeping the total pressure of a vacuum chamber at 1×10^{-2} Torr or lower during formation of the metal oxide dielectric film on the substrate, as claimed in independent claims 47 and 119-121.

The pressure before the material gases are introduced is 1×10^{-4} Pa. Kajita et al. discloses the use of oxygen as an oxidation gas. However, the oxygen is introduced only at the beginning stage of the formation of the metal oxide dielectric film, and oxygen is not used during the formation of the Cu film. The oxidation of Cu takes place, and electric resistance of the Cu layer increases unfavorably. In contrast, in the present invention, the pressure is kept at 1×10^{-2} Torr or lower, and oxidation gas is introduced during the entire process of formation of the dielectric film. Eguchi et al., Yuuki et al., and Moise et al. do not disclose keeping the total pressure of a vacuum chamber at 1×10^{-2} Torr or lower during formation of a metal oxide dielectric film.

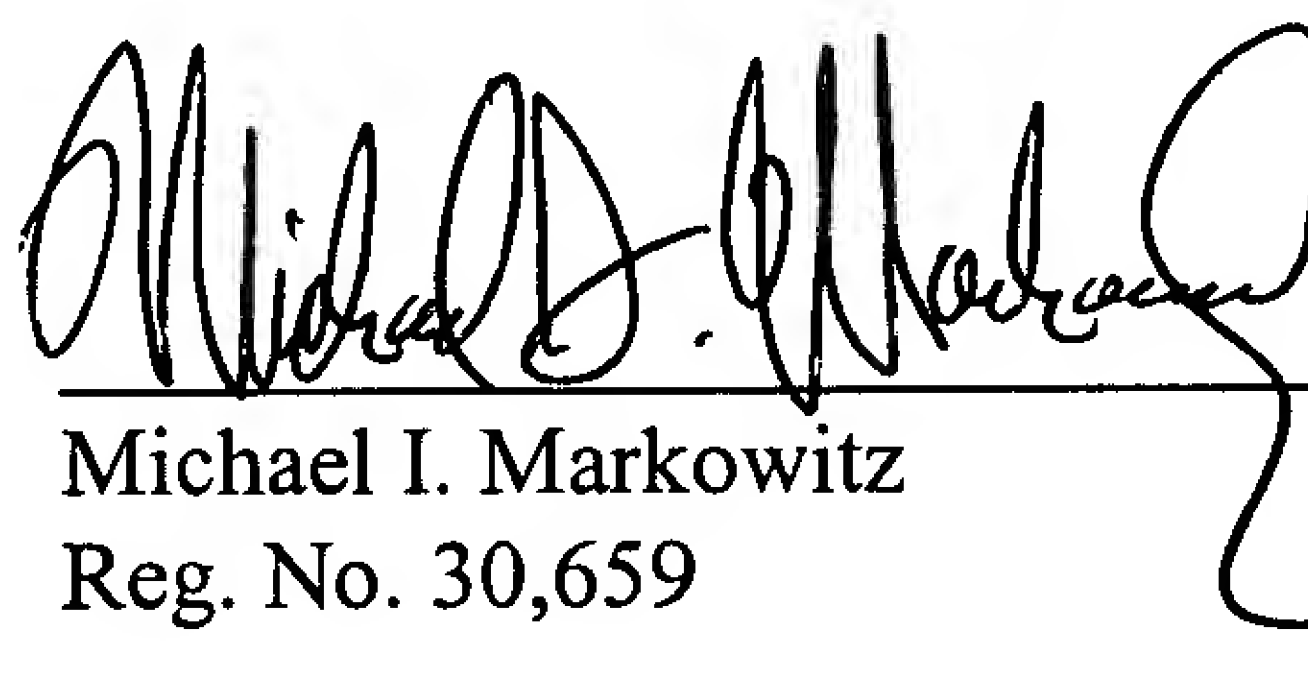
CLOSING

An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that independent claims 47 and 119-121 are in condition for allowance, as well as those claims dependent therefrom. Passage of this case to allowance is earnestly solicited.

However, if for any reason the Examiner should consider this application not to be in condition for allowance, he is respectfully requested to telephone the undersigned attorney at the number listed below to schedule a telephonic interview, which in the case of non-allowability is desired by the undersigned attorney, prior to the issuance of a further Action.

Any fee due with this paper, not fully covered by an enclosed check, may be charged on Deposit Account 50-1290.

Respectfully submitted,



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